

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-9, 11-13 and 15-19 remain pending in the present application. Claims 1, 12 and 16 are amended by the present amendment. Support for the amended claims can be found at least at p. 15, line 18-p. 16, line 25 of the specification. No new matter is added.

In the outstanding Official Action, Claims 1-9, 11-13 and 15-19 were rejected under 35 U.S.C. §103 as unpatentable over Marturano et al. (U.S. Patent No. 5,636,230, hereinafter Marturano) in view of Kumar (U.S. Patent No. 6,269,08).

At p. 4, the outstanding Official Action contends that Marturano describes all the Applicants' claimed features with the exception of at least "determining by the information delivery apparatus, in accordance with a given standard without receiving a request for retransmission that at least one of the radio terminals is predetermined prior to transmission of the multicast information to the radio stations, as being the retransmission-permitted terminal permitted for retransmission of the multicast information". In an attempt to remedy this deficiency, the Official Action cites Kumar as describing this more detailed aspect of the Applicants' invention, and states that it would have been obvious to one of ordinary skill in the art at the time of the invention, to combine the cited references to arrive at Applicants' claims. Applicants respectfully submit that amended independent Claims 1, 12 and 16 recite novel features clearly not taught or rendered obvious by the applied references.

Amended independent Claim 1 recites, in part, a retransmission control method in a multicast service providing system in which an information delivery apparatus transmits multicast information to radio terminals within a service area of the information delivery apparatus via a radio station. Some of the radio terminals of the service area are configured to send a request for retransmission of multicast information in case of an error, while others

of the radio terminals are configured not to send request for retransmission. The method including:

...(a) determining whether respective of the radio terminals within the service area is designated as a retransmission-permitted terminal permitted for retransmission of the multicast information, and determining by the information delivery apparatus, *in accordance with a parameter representing a quality of communications of each of the radio terminals* without receiving a message or a request for retransmission from the radio terminals by the information delivery apparatus that at least one of the radio terminals is permitted as being the retransmission-permitted terminal permitted for retransmission of the multicast information...

Independent Claims 12 and 16, while directed to alternative embodiments, are amended to recite substantially similar features. Accordingly, the remarks and arguments presented below are applicable to each of independent Claims 1, 12 and 16.

As discussed in an exemplary embodiment at p. 15, line 29-p. 16, line 2 of the specification, the base station (BS) measures received levels of control signals, such as connection requests sent by the mobile stations at the time of an initial connection, and the BS determines mobile stations having received levels lower than a given threshold level as being mobile station to be placed in the retransmission control. Further, p. 16, lines 9-22 of the specification discloses that the use of received levels as a parameter that represents the quality of communications is based on a situation in which the mobile stations with relatively low received levels have a high packet error ratio and more frequently request retransmission than mobile stations with relatively high received levels. Thus, the method of determining mobile stations having a high correlation of reception errors with other mobile stations as being the retransmission-permitted terminals makes it possible to improve the quality of communications for as many mobile stations as possible.

Turning to the applied references, Kumar describes a method for multicast file distribution and synchronization in data networks.¹ Specifically, Kumar describes an active receiver selection process, in which the FDSP server selects, in response to a token request message received from a number of FDSP clients, the first FDSP client that responds as the active receiver. (See e.g., step S05 in Fig. 5 of Kumar).

Kumar, however, fails to teach or suggest “determining by the information delivery apparatus, *in accordance with a parameter representing a quality of communications of each of the radio terminals* and without receiving a message or a request for retransmission from the radio terminals by the information delivery apparatus, that at least one of the radio terminals is predetermined as being the retransmission-permitted terminal permitted for retransmission of the multicast information,” as recited in amended independent claim 1.

In addressing the “determining” feature as previously recited in independent Claim 1, the outstanding Official Action relies on col. 6, line 52-col. 7, line 10 of Kumar. At Fig. 5, Kumar provides a detailed explanation of the active receiver selection process (which corresponds to box 401 of the FDSP file distribution process in Fig. 4). The Official Action asserts that the “standard” previously recited in Claim 1 is the receiver selection process described by Kumar.

However, col. 7, lines 63-66 of Kumar describes that when the FDSP server receives the client token request messages from the responding FDSP clients, the FDSP server selects the first responding FDSP client as the active receiver. (See, e.g., box 503 in Fig. 5). Moreover, Kumar describes that the first responding FDSP client is selected because it is determined to be the closest to the FDSP server, and the objective of Kumar’s process is to select the FDSP client with the shortest delay. Thus, the receiver selection process described by Kumar is based on the distance between the base station and each of the mobile stations.

¹ Kumar, Abstract.

More specifically, Kumar describes that the base station (FDSP server) determines the retransmission-permitted terminal (the active receiver) by receiving messages from the mobile stations (FDSP clients) and selecting the first responding mobile station.

Thus, Applicants respectfully submit that Marturano and Kumar neither alone, nor in combination, teach or suggest “determining by the information delivery apparatus, *in accordance with a parameter representing a quality of communications of each of the radio terminals* and without receiving a message or a request for retransmission from the radio terminals by the information delivery apparatus, that at least one of the radio terminals is predetermined as being the retransmission-permitted terminal permitted for retransmission of the multicast information,” as recited in amended independent claim 1.

Accordingly, Applicants respectfully request that the rejection of independent Claims 1, 12 and 16 (and the claims that depend therefrom) under 35 U.S.C. §103 be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-9, 11-13 and 15-19 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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